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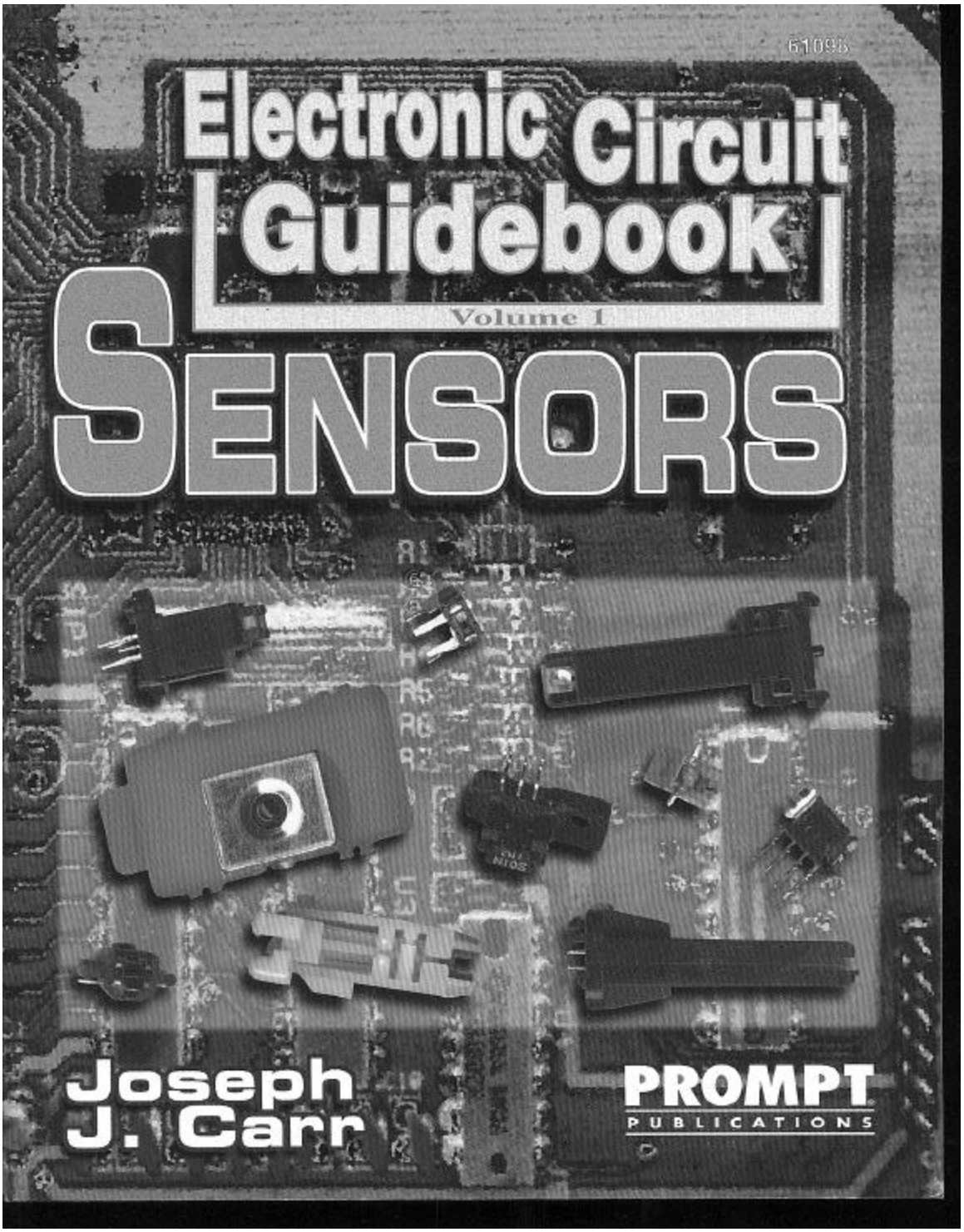

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Electronic Circuit Guidebook

Volume 1:

Sensors

Written By

Joseph J. Carr

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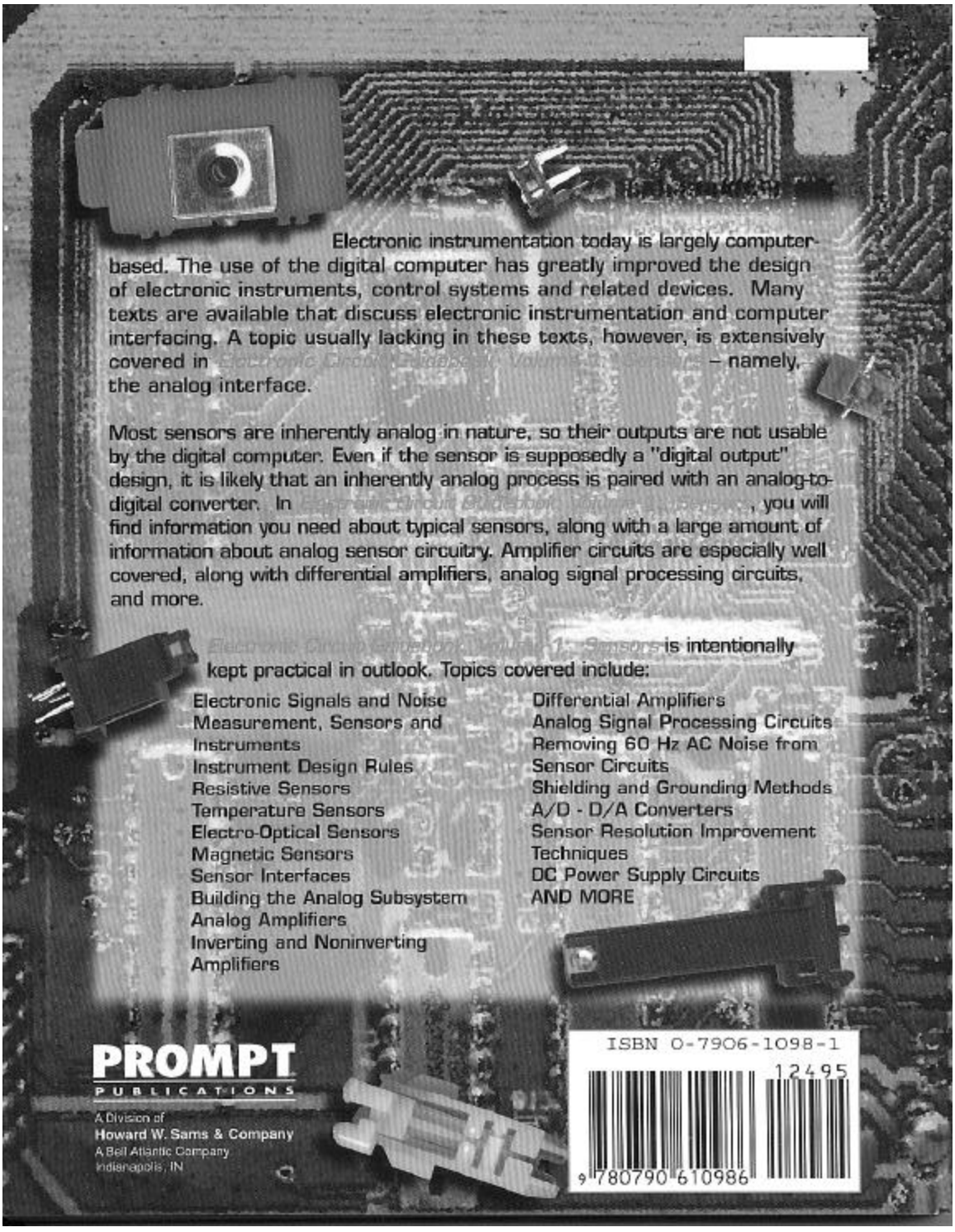

Electronic instrumentation today is largely computer-based. The use of the digital computer has greatly improved the design of electronic instruments, control systems and related devices. Many texts are available that discuss electronic instrumentation and computer interfacing. A topic usually lacking in these texts, however, is extensively covered in – namely, the analog interface.

Most sensors are inherently analog in nature, so their outputs are not usable by the digital computer. Even if the sensor is supposedly a "digital output" design, it is likely that an inherently analog process is paired with an analog-to-digital converter. In , you will find information you need about typical sensors, along with a large amount of information about analog sensor circuitry. Amplifier circuits are especially well covered, along with differential amplifiers, analog signal processing circuits, and more.

is intentionally kept practical in outlook. Topics covered include:

- Electronic Signals and Noise
- Measurement, Sensors and Instruments
- Instrument Design Rules
- Resistive Sensors
- Temperature Sensors
- Electro-Optical Sensors
- Magnetic Sensors
- Sensor Interfaces
- Building the Analog Subsystem
- Analog Amplifiers
- Inverting and Noninverting Amplifiers
- Differential Amplifiers
- Analog Signal Processing Circuits
- Removing 60 Hz AC Noise from Sensor Circuits
- Shielding and Grounding Methods
- A/D - D/A Converters
- Sensor Resolution Improvement Techniques
- DC Power Supply Circuits
- AND MORE

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